

Prior art rejections

Claims 1-10 were rejected under 35 USC §103(a) as being obvious over Nakamura (U.S. 6,342,933) in view of Moon (U.S. 6,229,695), Kajiwara (U.S. 5,791,913) and Iwamoto (U.S. 5,710,607).

The rejection asserted that Nakamura discloses a structure for holding an LCD panel between two members but does not teach the claimed structural features of the frame. The rejection further asserted that the remaining reference teach the structures particularly claimed.

The cited references do not teach the structural features recited in the present claims. The following discussion shows that the present claims cannot be rejected over the cited references.

Claimed invention

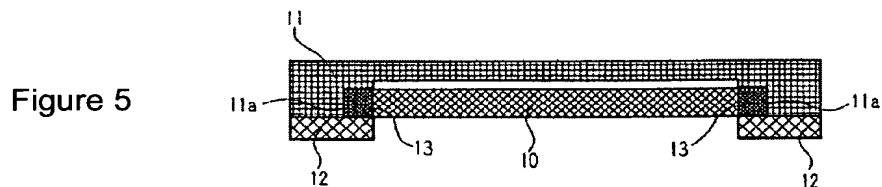
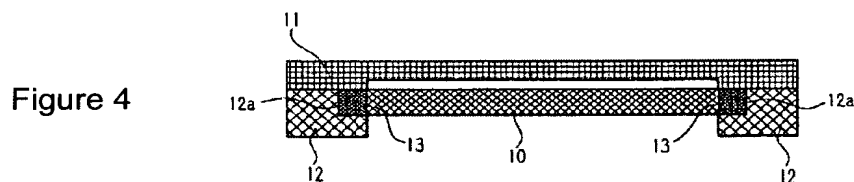
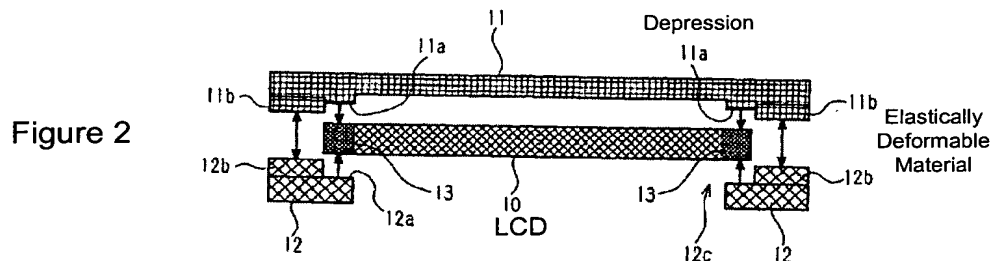
Independent claim 1 is the only pending independent claim. It recites features of a structure for holding an LCD panel as follows:

1. (Amended) An LCD panel fixing structure for fixing and holding an LCD panel, comprising:
  - a first holding member; and
  - a second holding member for engaging the first holding member to hold an LCD panel therebetween,wherein at least one of the first holding member and the second holding member includes a depression for engaging a peripheral edge of an LCD panel to hold the LCD panel therebetween, and  
wherein a portion of at least one of the first and second holding members that engages the other of the first and second holding members is comprised of an elastically deformable material.

Three basic features are required by this claim:

- the LCD panel is held between two holding members that engage each other
- either or both of the holding members have a depression that engages the LCD panel at its periphery
- either or both of the holding members has an elastically deformable material where it engages the other holding member

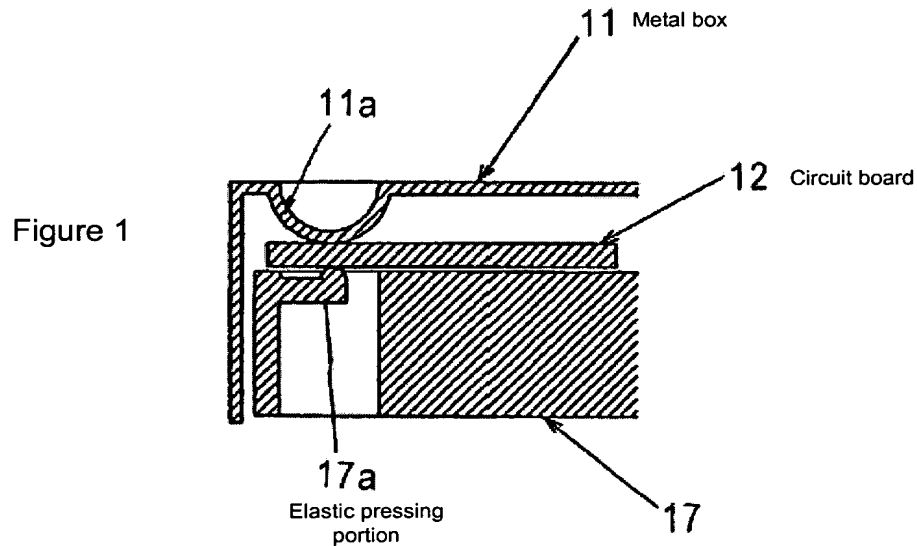
The following are drawings from the application showing three embodiments in accordance with claim 1:



In the embodiment of Figure 2 both holding members have depressions and elastically deformable material. In the embodiment of Figure 4, only the bottom holding member has depressions and elastically deformable material. In the embodiment of Figure 5, only the top holding member has depressions and elastically deformable material.

Nakamura

Nakamura does not have the features required by claim 1. The following is Nakamura's structure:



Nakamura's structure holds a circuit board between two members, not an LCD panel. The two members do not engage each other, and there is no elastically deformable material at portions of the members that engage each other.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

Moon

Moon does not have the features required by claim 1. The following is Moon's structure:

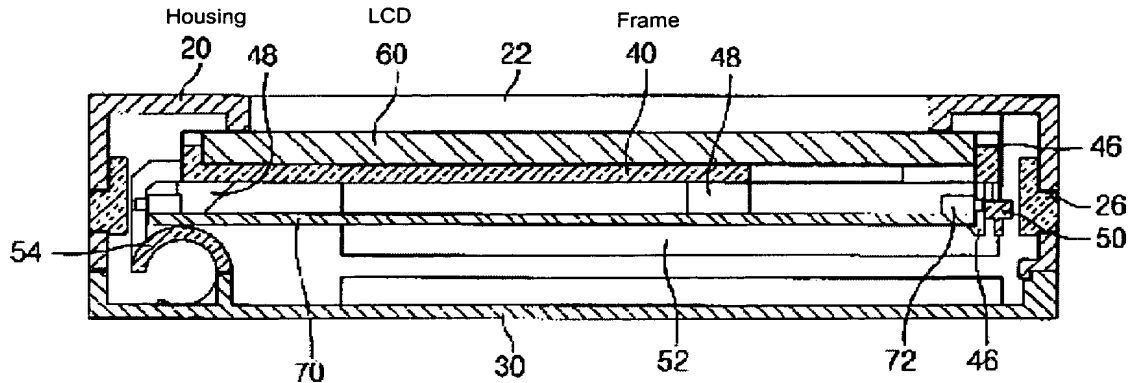


Figure 7

Moon's structure holds an LCD panel between a housing and a frame. The housing and the frame do not engage each other, and there is no elastically deformable material at portions of members that engage each other. Moon suggests that a resilient insulating layer may be interposed between the LCD panel and the housing (col. 5, lines 59-61). However this is not an elastically deformable member on a portion of a holding member that engages the other holding member, rather it is a layer on a portion of the frame that engages the LCD itself, not another holding member.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

Kajiwara

Kajiwara does not have the features required by claim 1. The following is Kajiwara's structure:

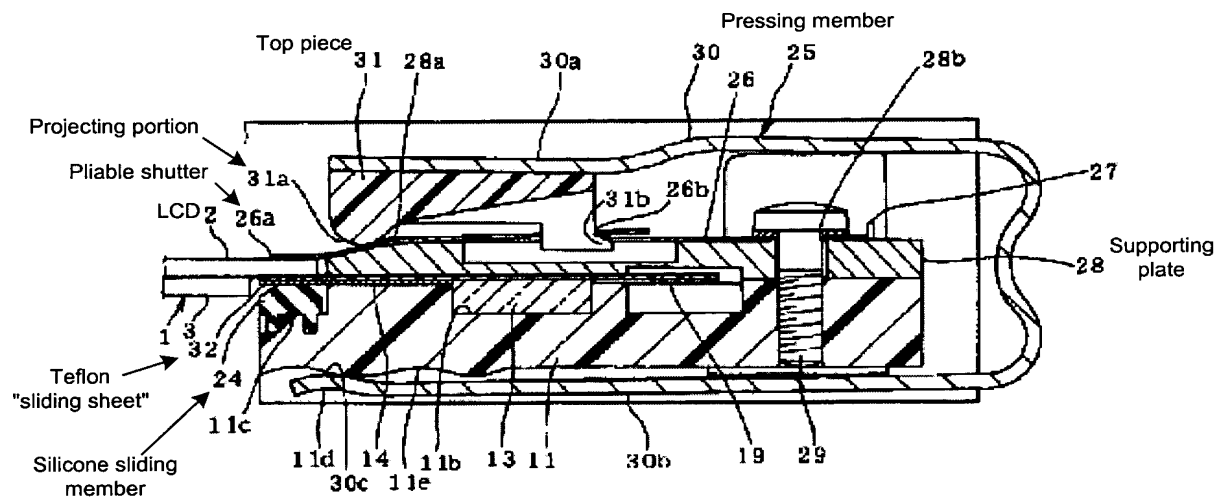


Figure 6

Kajiwara's structure holds an LCD panel between a teflon "sliding sheet" supported by a silicone sliding member, and a pliable shutter that is pressed against the LCD panel through the action of a projecting portion, top piece and pressing member. The pressing member is slidable in and out with respect to the LCD to clamp the LCD in place. The LCD panel is pressed into a corner of the device by a mechanism illustrated at the lower left portion of Figure 2.

Kajiwara's teflon sliding sheet and pliable shutter do not engage each other, and there is no elastically deformable material at portions where they engage. Neither has a recess that engages the LCD panel.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

Iwamoto

Iwamoto discloses eight different structures for holding LCD panels. None of them has the features required by claim 1. The structures are discussed individually:

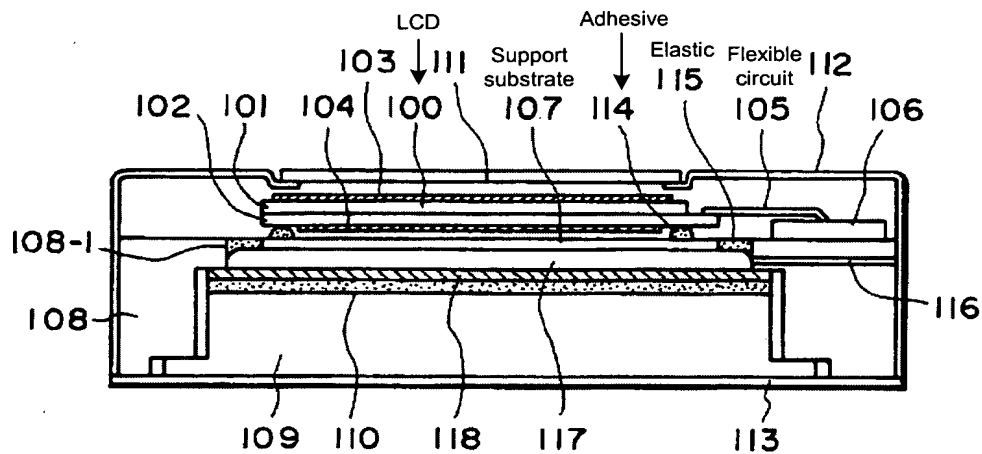


Figure 1

In the embodiment of Figure 1 the LCD panel is attached by adhesive at its bottom side only to a supporting plate. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

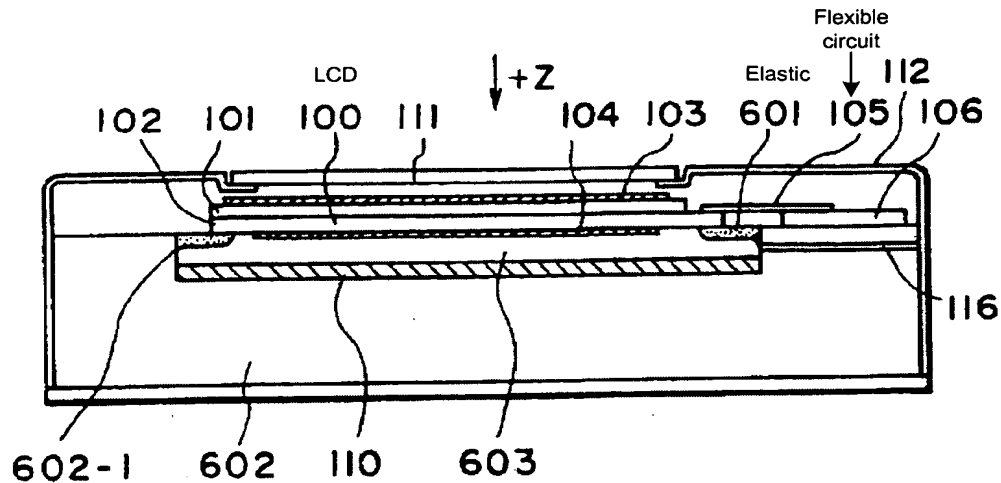


Figure 6

In the embodiment of Figure 6 the LCD panel is held in place by elastic members at its lower side only. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

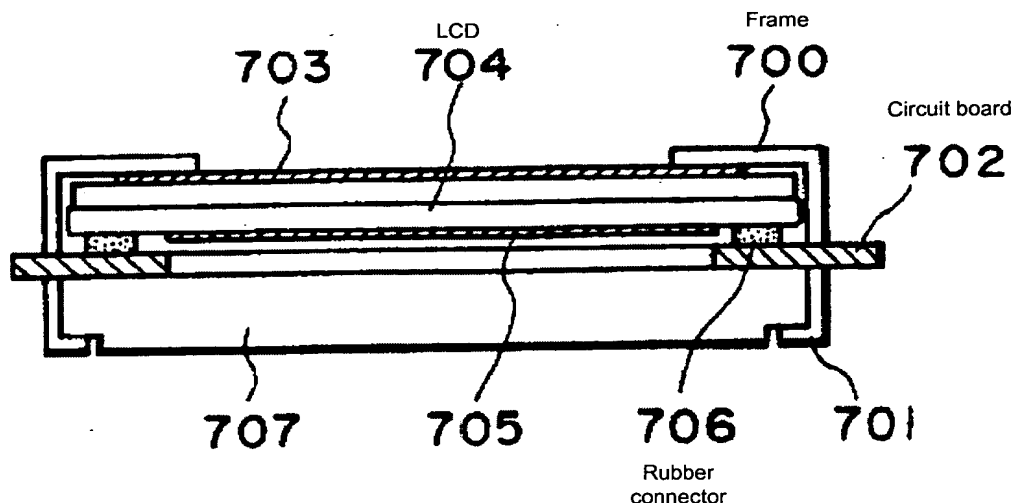


Figure 7

In the embodiment of Figure 7 the LCD panel is held between a frame and a rubber connector. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No



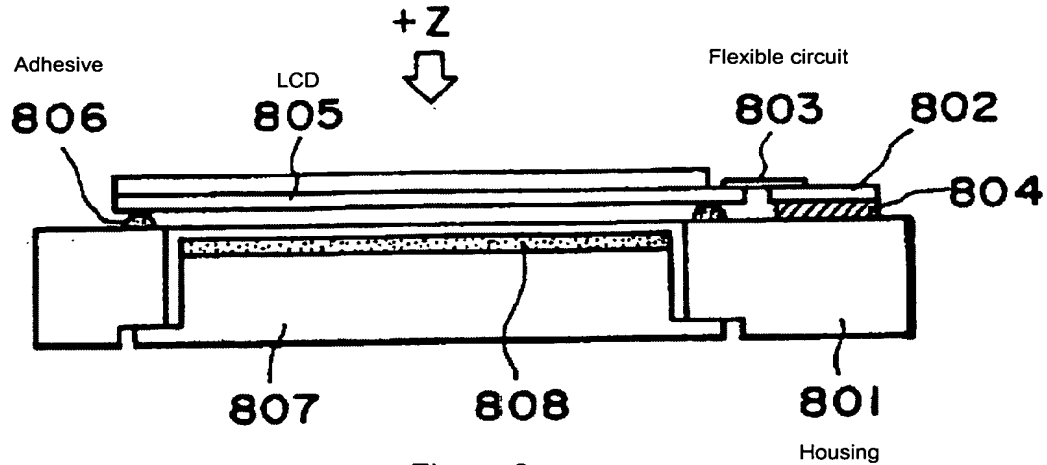


Figure 8

In the embodiment of Figure 8 the LCD panel is attached to a housing by an adhesive at its lower side only. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

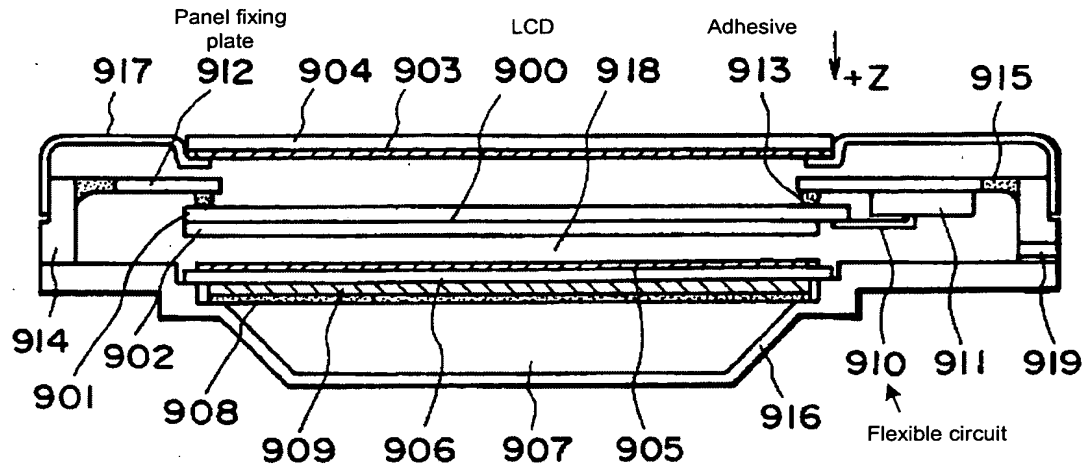


Figure 9

In the embodiment of Figure 9 the LCD panel is attached to a panel fixing plate by an adhesive at its upper side only. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

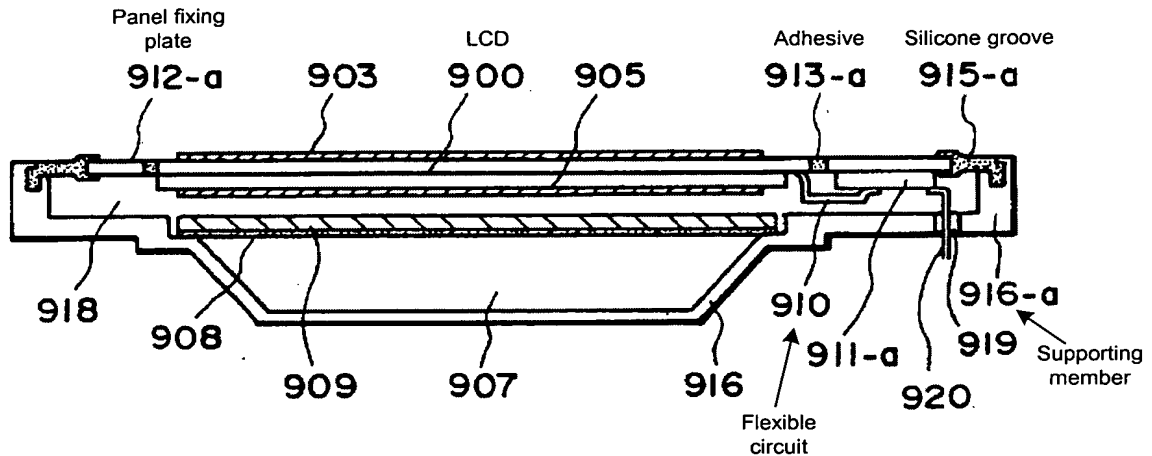
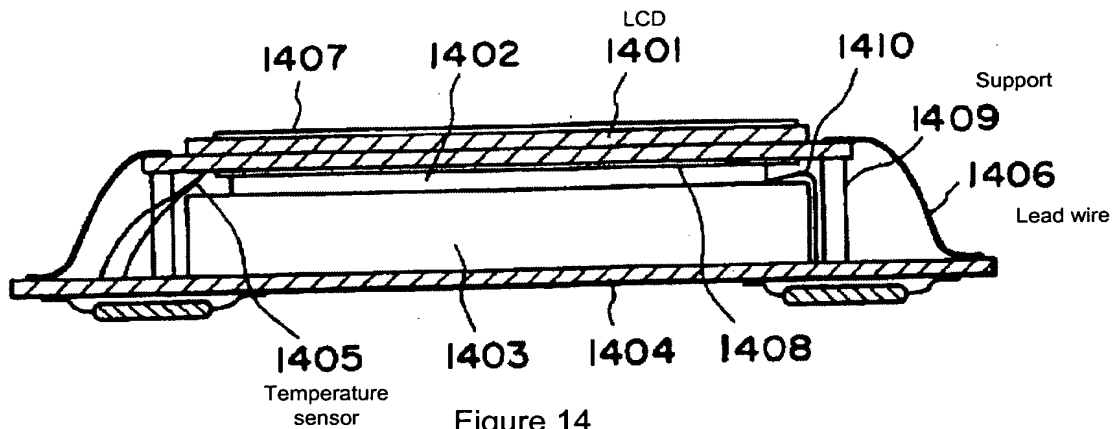


Figure 13

In the embodiment of Figure 13 the edges of the LCD panel are attached by adhesive to a panel fixing plate. The edges of the panel fixing plate are received by silicon grooves that are attached to a supporting member. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No



In the embodiment of Figure 14 the edges of the LCD panel are attached to supports. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

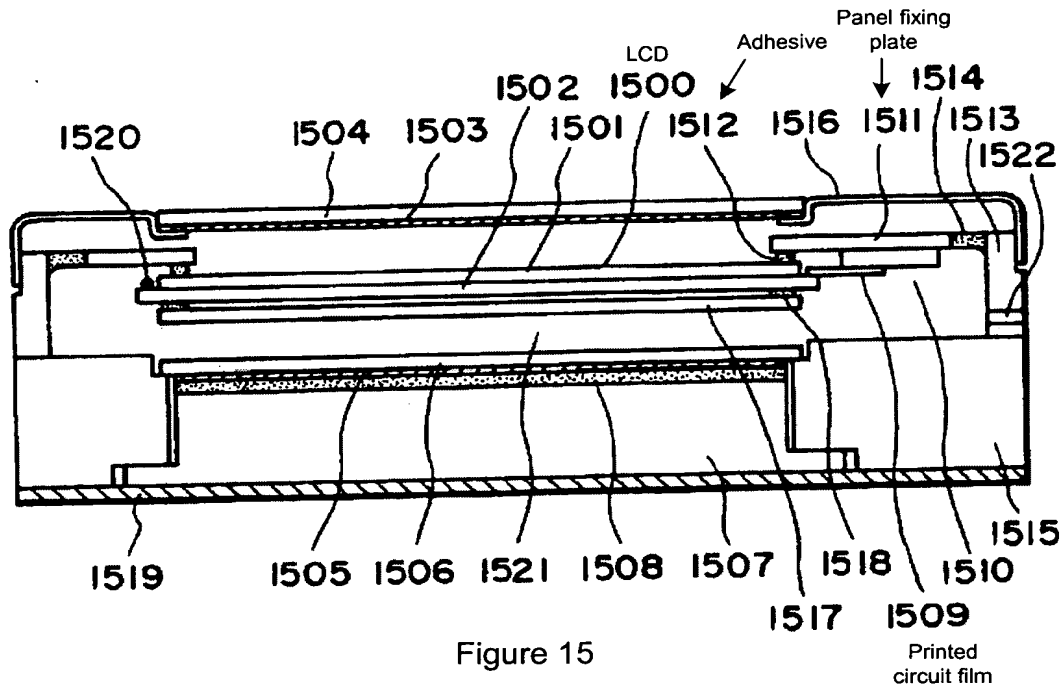


Figure 15

In the embodiment of Figure 15 the LCD panel is attached at its upper surface only to a panel fixing plate by adhesive. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

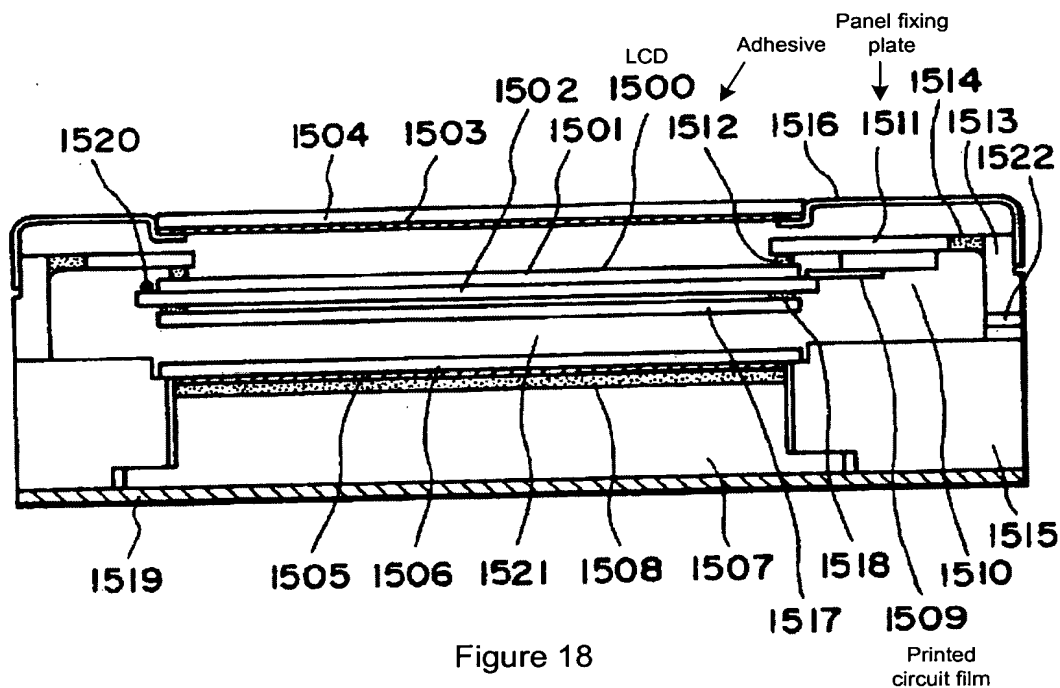


Figure 18

In the embodiment of Figure 18 the LCD panel is attached at its upper surface only to a panel fixing plate by adhesive. There is no pair of holding members that engage each other, no elastically deformable material at portions of holding members that engage each other, and no depressions that receive the LCD.

Feature	Present?
the LCD panel is held between two holding members that engage each other	No
either or both of the holding members have a depression that engages the LCD panel at its periphery	No
either or both of the holding members has an elastically deformable material where it engages the other holding member	No

From the illustrations above it is clear that the cited combination of references fails to teach most of the features required by the claims. These results are summarized in the following table:

Feature	Nakamura	Moon	Kajiwara	Iwamoto
The LCD panel is held between two holding members that engage each other	No	No	No	No
Either or both of the holding members have a depression that engages the LCD panel at its periphery	No	No	No	No
Either or both of the holding members has an elastically deformable material where it engages the other holding member	No	No	No	No

In order to present a *prima facie* case of obviousness, it must be shown that 1) all of the claimed features are taught in the prior art, and 2) there is a logical reason why a person of ordinary skill in the art would combine those features in the manner recited in the claim. In the present case the cited references fail to show that all of the features of claim 1 are present in the prior art. Therefore the cited references do not support a *prima facie* case of obviousness for claim 1 or any of its dependent claims 2-9. Applicant respectfully suggests that the claims have been shown to be distinguished from the art that the examiner believes to be most relevant to the invention, and therefore the rejection may be withdrawn and the claims may now be allowed.

The foregoing amendments and remarks address all bases for objection and rejection and are believed to place the case in condition for allowance. The examiner is invited to contact the undersigned to resolve any remaining issues.

Respectfully submitted,

Date: October 15, 2003

By 

FOLEY & LARDNER  
Washington Harbour  
3000 K Street, N.W., Suite 500  
Washington, D.C. 20007-5109  
Telephone: (202) 672-5407  
Facsimile: (202) 672-5399

Ronald Coslick  
Attorney for Applicant  
Registration No. 36,489